

DELTA PROTECTION COMMISSION

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**AGENDA ITEM #7**
November 5, 1999

To: Delta Protection Commission
From: Lori Clamurro, Delta Protection Commission Staff
Re: Category III Ecosystem Restoration Projects Tracking Memo

Since 1995, restoration projects aimed at improving the quality of the Delta environment have been funded. The specific purpose is to implement "non-flow" related actions, also called Category III projects, to restore and enhance habitat and species populations. The term Category III comes from the State Water Resources Control Board's adopted Water Quality Control Plan for the Bay-Delta, and Category III measures are included as part of the Bay-Delta Accord of 1994. As part of this agreement, funding for Category III projects has been provided by water users such as California Urban Water Agencies (CUWA), by the Central Valley Project Improvement Act (CVPIA), and by Proposition 204 (State share), and federal appropriations.

For federal fiscal year 2000, \$60 million in federal Bay-Delta Act funds has been appropriated to the CALFED Program; \$30 million is specified for ecosystem restoration activities and \$30 million for the other (non-ecosystem) Program components. CALFED staff, with input from the public and stakeholders, has been developing FY 2000 priorities to determine how these funds will be spent. FY 2000 priorities include completion of the Programmatic EIS/EIR and funding of the earliest of the Stage 1A actions to be implemented directly after the Record of Decision in June 2000. These early actions include: funding subsequent phases of earlier ecosystem restoration projects; exploring water use efficiency and recycling, transfers, and other water management actions; and completing environmental documentation specific to the South Delta area.

CALFED is currently in the process of determining how the \$30 million in FY 2000 appropriations for ecosystem restoration projects will be spent. An Interim Science Panel (ISP) was convened to review the proposals that were submitted during the April 1999 proposal solicitation process (a new solicitation was not conducted for this round of funding). The Ecosystem Round Table reviewed the recommendations of the ISP at its October 13, 1999 meeting, and did not take a position regarding the grants. The Bay-Delta Advisory Council reviewed the ISP recommendations and Ecosystem Round Table comments at its October 28, 1999 meeting. The Policy Group will review the proposed grants at its November 17, 1999 meeting. These recommendations will then go to Governor Davis and Secretary of the Interior Babbitt for final approval.

CUWA - Solicitation 1 (1995) -- no projects relevant to Delta

CUWA - Solicitation 2 (September 1996)

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Sherman Island Levee Habitat Demonstration Project	DWR RD 341	Construct 2.5-acre in-channel island using dredged material stored on Sherman Island.	\$960,000	Design complete; applicants looking for additional funding.
Predicting the Evolution of Ecological Functions from Restoration of Diked Wetlands in the Delta	University of Washington	Two-year study will compare both naturally- and artificially-breached diked wetland sites to evaluate the rate, pattern, and long-term success of breached-dike restoration (as compared to natural marsh sites).	\$575,172	Contract amendment of additional \$100,172 to increase field work and include an element for bird habitat, Feb-99.
Yolo Bypass Habitat Restoration Study	DWR	Study to provide data and technical recommendations on Bypass modifications, due to strong evidence of mortality to salmon and other species from stranding.	\$256,000	<u>Project is complete.</u>
Decker Island Tidal Wetland Enhancement Pilot Project	Port of Sacramento	Establish 35-40 acres of tidal wetland on Decker Island, and improve habitat on the remainder of the 70-acre site.	\$399,000	<u>Funding terminated.</u>
Inventory of Rearing Habitat for Juvenile Salmon in the North Delta and Lower Sacramento and Cosumnes Rivers	CSU Sacramento	Conduct a survey of rearing habitat for juvenile salmon in the north Delta. Attempt to distinguish races of juvenile salmon.	\$24,500	Field work complete.
Prospect Island Habitat Restoration Project	Corps of Engineers DWR	Purchase Prospect Island and restore 1,300 acres of shallow water, tidal wetlands, and aquatic habitat. (The \$2.5 million in Category III funds approved for this project consists of \$1.25 million for construction of the project and \$1.25 million for long-term operations and maintenance.)	\$2,500,000	Environmental documentation complete Aug-99.

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Prospect Island Monitoring Plan	DWR	Develop post-project monitoring plan for the Prospect Island project.	\$35,000	<u>Project complete.</u>
Introduction of Non-Indigenous Aquatic Species Research Program	San Francisco Estuary Institute	Develop regional monitoring program to provide early warning for eradication or mitigation. Assess priority for control of nonindigenous marsh plants. Public outreach on ballast water invasions. Examine post-invasion control mechanisms.	\$197,000	Project 90% complete.
Cosumnes River Preserve Acquisition	TNC	Acquire 4,356-acre Valensin Ranch property.	\$12,000,000	<u>Project complete.</u> (Escrow closed Dec-96.)
CALFED - Solicitation 1 (July 1997)				
<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Hastings Tract Fish Screen Feasibility Study	Hastings Island Land Company	Feasibility report on the installation of fish screens on gravity intake pipes and the relocation of the pipes from Cache Slough to Lindsey Slough	\$27,000	Contract being prepared.
Monitoring of Delta Contaminants	DeltaKeeper	One-year pilot study to establish baseline toxicity data at 12-14 sites throughout the Delta and eastside tributaries.	\$100,000	Contract signed Sep-98. Project underway.
Effects of Wetlands Restoration on Methyl Mercury Production	U.C. Davis	Yield baseline data quantifying the levels of methyl mercury production from diked and reflooded wetlands.	\$546,171	Contract signed Sep-98. Project underway. 1st year summary report complete.
Sedimentation Movement and Availability in the Delta	USGS	Monitor sediment transport at several sites to describe the movement of the sediment needed for habitat restoration.	\$1,046,200	Contract for \$587,000 signed Mar-98; contract for \$460,000 signed May-98.

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Contaminant Effects on Delta Smelt	U.C. Davis	Two-year study will evaluate contaminant effects on smelt by quantifying the overall health, condition, and growth rate of smelt collected from various sites.	\$437,236	Contract signed Nov-98. Project underway.
Jepson Prairie Restoration	Solano County Farmlands and Open Space Fdn.	Three-year program will restore shaded riverine aquatic habitat along portions of Barker Slough and Calhoun Cut, restore perennial grasslands, and design a habitat corridor connecting Jepson Prairie Preserve to Prospect Island.	\$244,801	Contract signed Jan-99. Plans complete; restoration underway.
Demonstration Project for Protection and Enhancement of In-Channel Islands	Association of Bay Area Governments	First phase (design) funded. Design four small restoration areas (Little Tinsley Island and Webb Tract Islands).	\$270,270	Contract signed Jul-98. Prelim design complete; looking for alternative sources of funding for construction, Sept-99.
Liberty Island Acquisition	Trust for Public Land (for USFWS)	Acquire 4,750-acre Liberty Island.	\$8,577,000	Project complete. Property acquired Sept-99.
Franks Tract Recreation Area Wetlands Habitat Restoration	Moffat & Nichol Engineers DPR DWR	First phase (design and environmental documentation) funded. Design four demonstration islands along Piper Slough to restore 45 acres of perennial aquatic habitat, shaded riverine aquatic habitat, and channel island and shoal habitat.	\$231,500	Contract signed Dec-98.
Tyler Island Levee Protection and Habitat Restoration Pilot Project	Habitat Assessment & Restoration Team, Inc.	Create/enhance shaded riverine aquatic and tidal perennial aquatic habitat along 2,000 feet of Georgiana Slough and along 3,000 feet of the North Fork of the Mokelumne River.	\$885,202	Contract signed Jul-98. Levee restoration and planting nearly complete.
Cosumnes River Preserve Start-Up Stewardship and Restoration (see "Cosumnes Floodplain Acquisition and Restoration" [pg. 4])	TNC Wildlife Conservation Board	Conduct baseline monitoring of vegetation, wildlife, avian, and fish resources.	\$1,975,100	Contract signed Jun-99.

<u>Title</u> Mokelumne River Setback Levee and Habitat Restoration	<u>Applicant(s)</u> RD 2110	<u>Description</u> Construct a 3.4-mile levee set back approximately 400 feet from the existing levee.	<u>Funding</u> \$365,000	<u>Status</u> Project on hold. (TNC purchasing McCormack-Williamson Tract.)
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CALFED - Solicitation 2 (September 97)

<u>Title</u> Assessing Impacts of Selenium on Restoration of the Bay-Delta Eco-system	<u>Applicant(s)</u> USGS	<u>Description</u> Three-year study evaluating selenium in the Bay-Delta to develop models useful for selenium management.	<u>Funding</u> \$1,588,709	<u>Status</u> Contract signed Aug-98. Project underway.
Cache Slough Shaded Riverine Aquatic Habitat Enhancement	RD 2060	First phase (design) funded. Design restoration for 2,000 ft. of levee bank where erosion has removed shaded riverine aquatic habitat.	\$85,000	Contract signed Jun-98. Topographic survey completed.
Twitchell Island Subsidence Study	DWR USGS NHI Northwest Hydraulic Consultants, Inc. Phillip Williams & Associates Ltd.	First phase funded. Design and construct three large restoration pilot projects, totaling 600 acres, on Twitchell Island. Develop technical design recommendations for a restoration program to raise the surface level of subsided Delta islands.	\$3,583,000	Contract signed May-99. Work to begin in Sept-99.
Culture of Delta Smelt	U.C. Davis	Establish a functional culture system to provide smelt embryos, larvae, juveniles, and adults for laboratory testing.	\$194,870	Contract signed Sept-98. Project underway. 1st year summary report Oct-99.
Cosumnes Floodplain Acquisition and Restoration	TNC	Acquisition of fee or easement interests on three properties (totalling 2,195 acres) contiguous to the Preserve.	\$3,500,000	Project complete. Properties acquired Dec-98.
Sediment Water Quality (Designated Action)	DFG RWQCB Delta Protection Commission	Develop criteria for the Central Valley Regional Water Quality Control Board to permit reuse of material dredged in the Delta.	\$500,000	All contracts signed. Technical Advisory Panel to meet Nov-99.

CALFED - Solicitation 3 (May 1998)

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Adult Fall-Run Chinook Salmon in the Lower San Joaquin River and South Delta	DFG	Monitor upstream movement of fall-run salmon in the lower San Joaquin River and South Delta. Determine whether the installation of three temporary barriers at the head of Old River or low dissolved oxygen content significantly impede upstream migration.	\$285,000	Contract signed Jun-99 Project requires time extension due to delays in obtaining equipment.
Cosumnes River Salmonid Barrier Program	Fishery Fdn. of California (FFC)	Install fish passage structures at two summer dams in the lower Cosumnes River. Upgrade fish ladders at Granite Dam to current DFG hydraulic specifications.	\$188,255	Contract signed Mar-99. Permits submitted.
Hastings Tract Fish Screen, Phase II: Construction	Hastings Island Land Company	Place fish screens on gravity intake pipes, and relocate the pipes from Cache Slough to Lindsey Slough.	\$271,250	Contract being drafted.
Rhode Island Floodplain Management and Habitat Restoration	DFG	First phase (survey) funded. Survey conditions to determine specific improvement needs. Plan to improve fish and wildlife carrying capacity on the 67-acre island by increasing the width, height, and stability of the island's breached levees.	\$25,000	Contract signed Apr-99.
Stone Lakes National Wildlife Refuge Acquisitions	USFWS	Acquire fee title interest in one property totaling about 500 acres.	\$1,900,000	USFWS proposes alternative site for acquisition; original site sold to another party.
Fern-Headreach Tidal Perennial Aquatic and Shaded River Aquatic Conservation Project	Thomas Luckey	Exercise purchase option on the Fern-Headreach Island Complex, and commit the entire 168-acre complex to shallow water habitat (140 acres) and shaded riverine aquatic habitat (28 acres).	\$425,000	Contract signed May-99. Acquisition and contaminant surveys being completed.

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Cosumnes River Acquisition, Restoration Planning, and Demonstration	TNC BLM Wildlife Conservation Board	Acquire fee title interest in a 300-acre property contiguous to the Cosumnes River Preserve.	\$750,000	Contract signed May-99.
Biological Assessment of Green Sturgeon in the Sacramento-San Joaquin Watershed	U.C. Davis DFG	Two-year study to determine baseline information regarding the green sturgeons' biological requirements in the watershed.	\$241,000	Contract signed Mar-99. Project underway.
Watershed Restoration Strategy for the Yolo Bypass	Yolo Basin Fdn.	Develop a local implementation strategy for the ERPP's environmental restoration in the Yolo Bypass.	\$244,188	Contract signed Jun-99. Watershed work group is meeting.
Lower Putah Creek Watershed Stewardship Plan	Solano County Dept. of Environmental Mgt.	Develop a community-based watershed plan for lower Putah Creek.	\$100,500	EPA/NFWF cooperative agreement Feb-99; contract expected Jun-99.
Lower Mokelumne River Watershed Stewardship Plan	San Joaquin County RCD	Develop a community-based watershed plan for lower Mokelumne River.	\$159,000	Contract signed Apr-99. Watershed coordinator hired.
Traveling Film Festival	Independent Documentary Group S.F. Public Library S.F. Recreation and Park Dept.	Package and distribute a six-film Traveling Festival about Bay and Delta habitats, wildlife, and restoration.	\$54,000	<u>Project complete.</u> (See also Apr-99 solicitation, [pg. 10])
Discover the Flyway	Yolo Basin Fdn.	Two-year program to expand curriculum and activities for middle school and high school students, and expand trips and training sessions for the general public.	\$49,000	<u>Project complete.</u>
Bay-Delta Environmental Restoration Education Program	Water Education Foundation	Provide outreach to increase understanding of Bay-Delta watershed ecology.	\$40,000	<u>Project complete.</u>

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Water Challenge 2010	S.F. Bay Model Visitor Center Corps of Engineers	Traveling exhibit would allow visitors to manage Delta water for ecosystem restoration and other beneficial uses. Design phase funded.	\$64,500	Project complete. (See also Apr-99 solicitation, [pg. 10])
Developing a Methodology to Accurately Simulate the Entrainment of Fish	DFG	Purchase or lease a barge, mount a pipe, pump, and flume to hold a sampling net on board the barge, and conduct sampling of one of DWR's agricultural diversion siphons on Sherman Island.	\$200,000	DFG Budget Office, Sept-99.

CALFED - Designated Actions (February 1999)

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Prospect Island Monitoring Project (Designated Action)	DWR	Establish a baseline to be used as a guide for development and implementation of future projects. Info would also be used for adaptive management.	\$915,000	Contract being drafted.
Cosumnes River Feasibility Study (Designated Action)	Corps of Engineers TNC	Study will identify, design, and estimate costs for environmental restoration and flood damage reduction opportunities along the Cosumnes River.	\$400,000	Contract signed Jun-99. Completing final study plan, Sept-99.
Mokelumne River Feasibility Study (Designated Action)	Corps of Engineers East Bay MUD	Study will identify, design, and estimate costs for environmental restoration and flood damage reduction opportunities along the Mokelumne River.	\$400,000	Contract signed Apr-99. Completing final study plan, Sept-99.
McCormack-Williamson Tract Acquisition (Designated Action)	TNC	Acquire McCormack-Williamson Tract.	\$5,250,000	Project complete. Property acquired Sept-99.
Restore Habitat on McCormack-Williamson Levees (see above). (Designated Action)	TNC	Monitor riparian vegetation, wildlife, avian, and fish resources.	\$860,000	Contract being drafted.

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Assessment of Ecological and Human Health Impacts of Mercury in the Bay-Delta Watershed (<i>Designated Action</i>)	CSU San Jose	Studies will be undertaken to better understand information that will lead to the reduction of mercury in resident fish tissues to levels that are not harmful to humans or wildlife.	\$3,700,000	Contract being drafted.

CALFED - Solicitation 4 (April 1999)

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Develop Fish Screen Criteria for Native Sacramento-San Joaquin Watershed Fishes (Fish Treadmill Project)	U.C. Davis Hydraulics Lab	Evaluate performance and behavior of small Delta and upstream fishes in multi-vector flows near fish screens, in order to develop fish screen design, flow, and operational criteria that reduce adverse impacts of diversions on these species.	\$847,690	Contract being drafted.
East Delta Habitat Corridor (Georgianna Slough)	Habitat Assessment and Restoration Team	Builds upon previously-funded project. Improve habitat conditions along 14 miles of Georgianna Slough. (Enhance existing berms, restore and enhance tidal freshwater marsh, remove exotic vegetation from berms and replace with native species, expand monitoring program initiated on Tyler Island under earlier CALFED grant.)	\$1,133,000	Contract being drafted.
Understanding Tidal Marsh Processes and Patterns	University of Washington	Builds upon previously-funded project (Predicting Evolution of Biological Functions of Diked Wetlands). Conceptual model developed in earlier project will be extended to Suisun Marsh and San Pablo Bay/North Bay. Provide critical information on whether restoration of diked wetlands would provide natural wetland functions to support shallow-water habitat and rehabilitate food web.	\$1,073,513	Contract being drafted.

<u>Title</u>	<u>Applicant</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Cosumnes-Mokelumne Paired Basin Studies (Linked Hydrogeomorphic Ecosystem Models to Support Adaptive Management)	U.C. Davis Center for Integrated Watershed Science and Management	Develop a demonstration monitoring and assessment program for the Cosumnes and Mokelumne Rivers. Three-year study of five core areas: hydrology, geomorphology, water quality, aquatic resources, and data analysis/dissemination. Baseline info would be used to test and validate models guiding long-term monitoring program dedicated to adaptive management.	\$1,592,396	Contract being drafted.
Chronic Toxicity of Environmental Contaminants in Sacramento Splittail: A Biomarker Approach	U.C. Davis Dept. of Animal Science	Measure four biological indicators (contaminant exposure, general condition indices, organ & reproductive dysfunction, and individual-level response) to evaluate the chronic effects of contaminants (mercury, selenium, diazinon, organochlorine pesticides) on the health of splittail. Three-year study.	\$693,895	Contract being drafted.
Assessment of Pesticide Effects on Fish and Their Food Resources in the Sacramento-San Joaquin Delta	U.C. Berkeley	Three-year laboratory and field study to provide info on pesticide toxicity to resident species. Results would be put into an ecological context focusing on juvenile chinook salmon and their prey.	\$1,634,501	Contract being drafted.
Determination of the Causes of Dissolved Oxygen Depletion in the San Joaquin River	DWR	Develop database on source loads of oxygen-depleting substances, collect additional field data, and fill data gaps in existing models. Develop a management action plan to eliminate dissolved oxygen depletion in the lower San Joaquin River near Stockton during the fall. Three-year study.	\$892,400	Contract being drafted.
Dissolved Organic Carbon Release from Delta Wetlands, Part I	USGS	Study will characterize the concentration of dissolved organic carbon released from different wetland types within the Delta and by agricultural activity. Data will address incorporation of organic carbon into Delta food web as well as health concerns associated with drinking water quality.	\$1,434,449	Contract being drafted.

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Evaluation of the Potential Impacts of the Chinese Mitten Crab on the Benthic Community in the Delta	DWR	Evaluate how the downstream migration of adult crabs impacts the food webs of the Delta and northern estuary.	\$152,233	Contract being drafted.
Purple Loosestrife Prevention, Detection, and Control Action for the Sacramento-San Joaquin Delta	CA Dept. of Food and Agriculture	Three-year project would detect and eradicate the small but spreading purple loosestrife infestations in the Delta and nearby hydrologic units. (Part of this project [\$201,306] was funded as a Nonnative Invasive Species Designated Action in July 1999; the remainder of the cost is covered here.)	\$131,297	Contract being drafted.
Health Monitoring of Hatchery and Natural Fall-Run Chinook in the San Joaquin River	USFWS	Characterize the health and physiological condition of natural and hatchery juvenile chinook in the San Joaquin River and Delta, and investigate whether hatchery fish spread disease to natural populations.	\$38,996	Contract being drafted.
Water Challenge 2010 Exhibit	Corps of Engineers SF Bay Model Visitor Center	Construction and installation of a hands-on exhibit which allows users to apportion water from one large tank into three smaller tanks (representing the needs of agriculture, cities, and the environment). CALFED previously funded the design phase.	\$52,015	Contract being drafted.
Traveling Film Festival Exhibit	Independent Documentary Group	Applicants requested funding to expand the film exhibit in the Bay Area, as well as into Sacramento and other locales in the Central Valley and North Delta. CALFED funded this program in an earlier solicitation.	\$51,500	Contract being drafted.

CALFED - Designated Actions (July 1999)

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Inundation of a Section of the Yolo Bypass to Restore Sacramento Splittail and Other Native Species (<i>Designated Action</i>)	Natural Heritage Institute	First phase (baseline monitoring, alternatives analysis, and design) funded. Pilot project will inundate a portion of the Yolo Bypass, on about 5,000 acres along its eastern edge.	\$820,679	Contract being drafted.

<u>Title</u>	<u>Applicant(s)</u>	<u>Description</u>	<u>Funding</u>	<u>Status</u>
Nonnative Invasive Species (NIS) Advisory Council (<i>Designated Action</i>)	USFWS	Establish a NIS Advisory Council to monitor and coordinate the efforts of the NIS program, and address issues requiring the commitment of agencies with existing NIS responsibilities.	\$50,000	Contract being drafted.
Reducing the Risk of Importation and Distribution of Nonnative Invasive Species (NIS) Through Outreach and Education (<i>Designated Action</i>)	UC Davis	Prevent future introductions by educating industries and representatives of adverse impacts of releasing NIS into the environment. Outreach will be through a series of workshops, public service announcements, and development of a video, a brochure, and a NIS website.	\$105,466	Contract being drafted.
Zebra Mussel Detection and Outreach Program (<i>Designated Action</i>)	DWR	Three-year project would educate the public about zebra mussels, and establish and operate an early detection system in the Central Valley, Bay-Delta, and water storage/delivery systems.	\$100,000	Contract being drafted.
Purple Loosestrife Prevention, Detection, and Control in the Delta and Associated Hydrologic Units (<i>Designated Action</i>)	CA Dept. of Food and Agriculture	Three-year project would detect and eradicate the small but spreading purple loosestrife infestations in the Delta and nearby hydrologic units.	\$201,306	Contract being drafted.
Introduced Spartina Eradication Project (<i>Designated Action</i>)	CA Coastal Conservancy	First phase (demonstration project) funded. Significantly reduce or eliminate the 1,000 acres of introduced Spartina in the Bay estuary; prevent spread into new Delta restoration projects.	\$250,000	Contract being drafted.
Guidebook to Prevent and Control Nonnative Invasive Plants in Shallow Water Habitats of the Bay-Delta (<i>Designated Action</i>)	San Francisco Estuary Institute	Guidebook would provide information for local control of the highest priority species of non-native plants in shallow water habitats.	\$76,750	Contract being drafted.
Effects of Introduced Clams on the Food Supply of Bay-Delta Fisheries (<i>Designated Action</i>)	San Francisco State University	Study how the introduced Asian clam has altered the feeding environments of native fish. Provide a detailed description of the status of the food web and likely impediments to rehabilitation.	\$100,490	Contract being drafted.